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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,518	12/12/2003	Alex T. Fensore III	SP-1699.1 US	9981
20875 7590 10/01/2007 MICHAEL C. POPHAL EVEREADY BATTERY COMPANY INC 25225 DETROIT ROAD P O BOX 450777 WESTLAKE, OH 44145			EXAMINER CREPEAU, JONATHAN	
			ART UNIT 1745	PAPER NUMBER
			MAIL DATE 10/01/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/734,518	<b>Applicant(s)</b> FENSORE, ALEX T.	
	<b>Examiner</b> Jonathan S. Crepeau	<b>Art Unit</b> 1745	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 August 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. This Office action addresses claims 1-45. The 35 USC 112 second paragraph rejection has been withdrawn. However, claims 1-45 remain rejected under 35 USC 102 and 103 for the reasons of record. Accordingly, this action is made final.

### ***Claim Rejections - 35 USC § 102***

2. Claims 1-11 and 34-45 are rejected under 35 U.S.C. 102(b) as being anticipated by Randell et al (U.S. Patent 5,378,559). The reference is directed to a zinc alkaline cell comprising a phosphate ester additive. The cell comprises a first electrode and a separator, and a second, inner electrode comprising zinc, a gelling agent, the phosphate ester additive, and an alkaline electrolyte (see col. 4, line 59). The phosphate ester comprises a monoester and diester (see col. 4, line 20), and corresponds to the claimed "rheological modifier." Regarding the yield stress and viscosity ranges recited in the instant claims, the anode of Randell et al. would inherently possess these characteristics. It is noted that in the instant application, a rheological modifier comprising 50% monoester, 30% diester and 3% phosphoric acid is disclosed as suitable for use in the invention (see [0030] of the instant specification). The additive of Randell et al. is very similar to the composition disclosed as usable as a rheological modifier, and as such, the use of the additive would inherently result in the anode having the claimed properties. See MPEP 2112.

3. Claims 1-11, 15-18, 22, and 34-45 are rejected under 35 U.S.C. 102(a) as being anticipated by WO 03/73530. The reference is directed to a zinc alkaline cell comprising a surfactant additive containing sulfonic acid and phosphate ester. The cell comprises a first electrode and a separator, and a second, inner electrode comprising zinc, a gelling agent, the additive, and an alkaline electrolyte. The phosphate ester corresponds to the claimed "rheological modifier" and is present in an amount of 4-75 ppm with respect to zinc, thereby anticipating the ranges recited in claims 15-18. Regarding claim 22, approximately 10% of the zinc powder is sized to pass through a 200 mesh screen (see [0045]). Regarding the yield stress and viscosity ranges recited in the instant claims, the anode of WO '530 would inherently possess these characteristics. It is noted that in the instant application, a rheological modifier comprising an organic phosphate surfactant is disclosed as suitable for use in the invention (see [0030] of the instant specification). As such, the use of the phosphate ester additive of WO '530 would inherently result in an anode having the claimed properties.

***Claim Rejections - 35 USC § 103***

4. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Randell et al. or WO '530.

WO '530 and Randell et al. are applied for the reasons stated above. However, neither reference expressly teaches that the second electrode comprises at least 60 wt% zinc as recited in claim 12.

However, the invention as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because the artisan would be motivated to use an amount of zinc in the batteries of Randell et al. or WO '530 that falls within the claimed range. Generally, the use of more active material allows for more battery capacity. It has been held that the discovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art. *In re Boesch*, 205 USPQ 215 (CCPA 1980).

- 5. Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Randell et al. or WO '530 in view of Urry (U.S. Patent 6,022,639).

WO '530 and Randell et al. are applied for the reasons stated above. However, neither reference expressly teaches that the zinc electrode comprises flakes, as recited in claims 19-21.

Urry teaches an electrode comprising zinc flakes in the abstract.

Therefore, the invention as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because the artisan would be motivated by the disclosure of Urry to use zinc flakes in the batteries of WO '530 or Randell et al. In column 2, line 23, Urry teaches that "it is desirable to have a zinc anode that enables significantly lower amounts of zinc to be used in the anode, while still maintaining an adequate current carrying matrix while maintaining good conductivity, improved high current discharge efficiency, and solves the problem of shock and vibration sensitivity." Accordingly, the artisan would be

motivated by the disclosure of Urry to use zinc flakes in the batteries of WO '530 or Randell et al.

6. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Randell et al. or WO '530 in view of Durkot et al (U.S. Patent 6,521,378).

WO '530 and Randell et al. are applied for the reasons stated above. However, neither reference expressly teaches that the zinc powder has a bimodal distribution of particle sizes, as recited in claim 23.

Durkot et al. teach a zinc electrode having a bimodal particle distribution in the abstract.

Therefore, the invention as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because the artisan would be motivated by the disclosure of Durkot et al. use a bimodal distribution of zinc powder in the batteries of WO '530 or Randell et al. In column 2, line 53, Durkot et al. teach that this configuration "can provide good cell performance characteristics, especially those characteristics related to high discharge rate performance." Accordingly, the artisan would be motivated by the disclosure of Durkot et al. use a bimodal distribution of zinc powder in the batteries of WO '530 or Randell et al.

Art Unit: 1745

7. Claims 24-33 are rejected under 35 U.S.C. 103(a) as being obvious over Randell et al. or WO 03/73530 in view of Moore et al (U.S. Pre-Grant Publication No. 2005/0106461).

WO '530 and Randell et al. are applied for the reasons stated above. However, neither reference expressly teaches that the zinc powder has the properties recited in claim 24.

Moore et al. is directed to a zinc alkaline cell wherein the zinc has specific values of BET surface area, tap density, KOH adsorption, and  $D_{50}$ .

Therefore, the invention as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because the artisan would be motivated to use the zinc powder of Moore et al. in the batteries of WO '530 or Randell et al. In the abstract, Moore et al. teach that "in one embodiment, the cell's gelled anode incorporates a limited quantity of zinc powder having specific physical characteristics that enable it to discharge efficiently over a wide range of electrical discharge conditions." Accordingly, the artisan would be motivated to use the zinc powder of Moore et al. in the battery of WO '530 or Randell et al.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the

application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

### *Response to Arguments*

8. Applicant's arguments filed August 14, 2007 have been fully considered but they are not persuasive. Applicant asserts that the Examiner has not met the burden of showing that the claimed characteristics are inherent in the applied references. In response, it is believed that this burden has been met. Regarding Randell et al., the Examiner asserted that the disclosed electrode containing a phosphate ester (comprising a monoester and diester) would inherently possess these characteristics since the instant application discloses an electrode containing a highly similar material comprising 50% monoester, 30% diester and 3% phosphoric acid. However, it is noted that other modifiers are disclosed in the instant application. From the disclosure in [0030], it can be ascertained that all of the disclosed rheological modifiers are organic phosphate surfactants. Therefore, the position is taken that materials falling within this genus would function as the instantly claimed rheological modifiers when used in an electrode. Randell et al. disclose a phosphate ester comprising a monoester and a diester, and WO '530 discloses a surfactant additive containing sulfonic acid and phosphate ester. It is submitted that



Art Unit: 1745

these materials are encompassed by the above-defined genus, and as such, the PTO has reason to believe that the electrode compositions of Randell et al. and WO '530 comprising these materials inherently possess the claimed characteristics. This rationale is believed to meet the PTO's burden in making a rejection based on inherency, pursuant to MPEP 2112 (IV). Since the PTO has provided facts tending to show inherency, the burden rests with Applicant to show otherwise.

According to MPEP 2112 (V):

V. ONCE A REFERENCE TEACHING PRODUCT APPEARING TO BE SUBSTANTIALLY IDENTICAL IS MADE THE BASIS OF A REJECTION, AND THE EXAMINER PRESENTS EVIDENCE OR REASONING TENDING TO SHOW INHERENCY, THE BURDEN SHIFTS TO THE APPLICANT TO SHOW AN UNOBVIOUS DIFFERENCE

"[T]he PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his [or her] claimed product. Whether the rejection is based on inherency' under 35 U.S.C. 102, on prima facie obviousness' under 35 U.S.C. 103, jointly or alternatively, the burden of proof is the same...[footnote omitted]." The burden of proof is similar to that required with respect to product-by-process claims. In re Fitzgerald, 619 F.2d 67, 70, 205 USPQ 594, 596 (CCPA 1980) (quoting In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433-34 (CCPA 1977)).

Thus, as it is believed that since the PTO has provided a reasonable basis of rejection, it is now incumbent on Applicant to show that the prior art products do not inherently possess the claimed characteristics. As such, the rejections as stated above are believed to be proper.

*Conclusion*

9. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Crepeau whose telephone number is (571) 272-1299. The examiner can normally be reached Monday-Friday from 9:30 AM - 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan, can be reached at (571) 272-1292. The phone number for the organization where this application or proceeding is assigned is (571) 272-1700. Documents may be faxed to the central fax server at (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

Art Unit: 1745

applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jonathan Crepeau  
Primary Examiner  
Art Unit 1745  
September 26, 2007